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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,739	07/21/2003	John Gomer Morgan	DN1993075D03	7168

7590 05/19/2004

The Goodyear Tire & Rubber Company
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EXAMINER	
JOHNSTONE, ADRIENNE C	

ART UNIT	PAPER NUMBER
1733	

DATE MAILED: 05/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/624,739	MORGAN ET AL.	
	Examiner	Art Unit	
	Adrienne C. Johnstone	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 July 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *49-52* is/are pending in the application.

4a) Of the above claim(s) *51* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *49 and 50* is/are rejected.

7)☒ Claim(s) *52* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *072103*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. This application contains claims directed to the following patentably distinct species of the claimed invention: a pneumatic tire whose metallic carcass cord construction is either 12x or 1+18 (specification p. 9 lines 27-35).

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 49 is generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

2. During a telephone conversation with Nancy Krawczyk on May 17, 2004 a provisional election was made with traverse to prosecute the invention of the species including the 1+18

construction, claims 49, 50, and 52. Affirmation of this election must be made by applicant in replying to this Office action. Claim 51 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Priority

4. As noted in the Reasons for Allowance in the parent application 08/768,152 Notice of Allowability, the grandparent application 08/514,081 recites on page 1 lines 10-20 of the specifcation: "The present invention relates to cord, cord reinforced plies and radial tires for vehicles. ... More particularly, the present invention relates to a structure of one or more plies formed of a cord reinforced composite having rubber where preferably the structure is for tires, such as for a tire carcass or a tire belt wherein at least one of the plies in the carcass or belt has the cords therein biased with respect to the direction of rotation of the tire." One of ordinary skill in the art would understand this text to mean that any of the cords of the invention disclosed in grandparent application 08/514,081 (and thus great grandparent application 08/360,793) could be used as the cords of a belt ply or carcass ply; however, claims 49, 50, and 52 recite cord constructions not disclosed in great grandparent application 08/360,793 (no disclosure in 08/360,793 that any metallic cord construction of at least two layers recited in claim 49 or the specific 1+18 metallic cord construction in claim 52 would be suitable as a cord construction of the invention) and therefore claims 49, 50, and 52 are entitled only to the parent application 08/768,152 filing date of December 17, 1996.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 49 and 50 are rejected under 35 U.S.C. 102(e) as being anticipated by Prakash et al. (5,709,760) or, alternatively, Prakash et al. (5,779,829).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

See Prakash et al. '760 col. 3 line 16 - col. 5 line 16 and Figure 3 or, alternatively, Prakash et al. '829 col. 3 line 18 - col. 4 line 67 and Figure 1: the references explicitly disclose the tensile strength range of at least (-2000xD+4400 MPa)x95% and from this disclosure one of ordinary skill in the art would have "at once envisaged" the claimed tensile strength range of at least −2000xD+4400 MPa and especially the tensile strength of −2000xD+4400 MPa, therefore the references implicitly disclose tensile strengths within the claimed range (see for example the case law cited in MPEP 2131.02 concerning species "at once envisaged" by a disclosed genus). See paragraph 4 above concerning claims 49, 50, and 52 being entitled only to the parent application 08/768,152 filing date of December 17, 1996. Note that if this rejection is overcome by applicants'

response to this Office action, the examiner will consider obviousness-type double patenting rejections based on the patented claims of Prakash et al. '760 and Prakash et al. '829.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 49 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneko et al. (5,873,962).

The only difference between the Kaneko et al. exemplary tire of embodiment G and the claimed tire is the filament tensile strength requirement of at least $-2000xD + 4400$ MPa, however Kaneko et al. teach to provide a high filament tensile strength of 3,400 to 3,900 MPa to increase breaking strength and reduce tire weight (col. 2 line 63 - col. 9 line 22). It would therefore have been obvious to one of ordinary skill in the art to provide for the carcass cords in the embodiment G tire the high filament tensile strength of 3,900 MPa as taught by the reference to increase breaking strength and reduce tire weight, which would satisfy the claimed tensile

strength requirement (Embodiment G: -2000x0.235 + 4400 MPa = 3,900 MPa to the required two significant figures).

10. Claims 49 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Assaad et al. (5,858,137) in view of Fujita et al. (5,603,208) and its equivalent Japanese Patent Application 6-184963, Kaneda et al. (5,609,013) and its equivalent Japanese Patent Application 6-184962, and Japanese Application 5-195455.

The only difference between the Assaad et al. tire and the claimed tire is that Assaad et al. are silent as to the tensile strength of the steel wires in the carcass cords (col. 3 line 16 - col. 6 Table 1), however it is well known in such steel tire cords to use high strength steel wires with tensile strength values falling in applicants' range in order to reduce tire weight and improve durability and fatigue resistance, as evidenced by Fujita et al. and its equivalent JP '963 (Fujita et al. col. 1 line 8 - col. 6 line 50: exemplary 0.18 mm diameter steel wire has a tensile strength of 406 kgf/mm^2 = 4000 MPa to the required two significant figures, -2000x0.18 + 4400 MPa = 4000 MPa to the required two significant figures), Kaneda et al. and its equivalent JP '692 (Kaneda et al. col. 1 line 7 - col. 8 line 10: Table 1 Run No. 1, 0.25 mm diameter steel wire has a tensile strength of 406 kgf/mm^2 = 4000 MPa to the required two significant figures, -2000x0.25 + 4400 MPa = 3900 MPa to the required two significant figures; Table 1 Run No. 3, 0.18 mm diameter steel wire has a tensile strength of 416 kgf/mm^2 = 4100 MPa to the required two significant figures, -2000x0.18 + 4400 MPa = 4000 MPa to the required two significant figures), and JP '455 (see translation: Table 2 Examples 4 and 8, 0.3 mm diameter steel wire has a tensile strength of 3800 MPa to the required two significant figures, -2000x0.3 + 4400 MPa = 3800 MPa to the required two significant figures) for example. It would therefore have been obvious to one of ordinary skill in the art to provide such well known high tensile strength steel wires for the carcass cords in the Assaad et al. tire in order to obtain the above-noted advantages.

11. Claims 49 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Umezawa et al. (4,572,264) or, alternatively, Takahira (4,986,327) or, alternatively, Helfer et al. (H1333) and its equivalent PCT Application WO91/14573, in view of Fujita et al. (5,603,208) and its equivalent Japanese Patent Application 6-184963, Kaneda et al. (5,609,013) and its equivalent Japanese Patent Application 6-184962, and Japanese Application 5-195455.

The only difference between the prior art tire and the claimed tire is that the tensile strength range for the steel wires in the prior art tire carcass cords encompasses the claimed range, as evidenced by Umezawa et al. (col. 1 line 4 - col. 6 line 37: reference silent as to the tensile strength of the carcass cord steel filaments), Takahira (entire document: reference silent as to the tensile strength of the carcass cord steel filaments, and Helfer et al. and its equivalent WO '573 (WO '573 p. 4 lines 6-17, p. 8 line 16 - p. 33 line 21: tensile strength of the super tensile carcass cord steel filaments is at least $-2000xD + 4080$ MPa where D is the filament diameter in millimeters, exemplary super tensile carcass cord construction of 3x0.22mm/9x0.20mm+1 at 14 EPI); however, it is well known in such steel tire cords to use high strength steel wires with tensile strength values falling in applicants' range in order to reduce tire weight and improve durability and fatigue resistance, as evidenced by Fujita et al. and its equivalent JP '963 (Fujita et al. col. 1 line 8 - col. 6 line 50: exemplary 0.18 mm diameter steel wire has a tensile strength of 406 kgf/mm^2 = 4000 MPa to the required two significant figures, $-2000x0.18 + 4400$ MPa = 4000 MPa to the required two significant figures), Kaneda et al. and its equivalent JP '692 (Kaneda et al. col. 1 line 7 - col. 8 line 10: Table 1 Run No. 1, 0.25 mm diameter steel wire has a tensile strength of 406 kgf/mm^2 = 4000 MPa to the required two significant figures, $-2000x0.25 + 4400$ MPa = 3900 MPa to the required two significant figures; Table 1 Run No. 3, 0.18 mm diameter steel wire has a tensile strength of 416 kgf/mm^2 = 4100 MPa to the required two significant figures, $-2000x0.18 + 4400$ MPa = 4000 MPa to the required two significant figures), and JP '455

(see translation: Table 2 Examples 4 and 8, 0.3 mm diameter steel wire has a tensile strength of 3800 MPa to the required two significant figures, -2000x0.3 + 4400 MPa = 3800 MPa to the required two significant figures) for example. It would therefore have been obvious to one of ordinary skill in the art to provide such well known high tensile strength steel wires for the carcass cords in the prior art tire in order to obtain the above-noted advantages.

Allowable Subject Matter

12. Claim 52 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to disclose or suggest applicants' tire, including the particular metallic 1+18 carcass cords having a filament diameter of 0.18 to 0.38 mm and a filament tensile strength of at least $-2000xD + 4400$ MPa, in the claimed environment.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adrienne C. Johnstone whose telephone number is (571)272-1218. The examiner can normally be reached on Monday-Friday, 10:30AM-7:000PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571)272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Adrienne C. Johnstone
Primary Examiner
Art Unit 1733

Adrienne Johnstone

May 17, 2004